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IRAN, NUCLEAR PROGRAMME AGREEMENT

On 25th November cheering crowds gathered at the airport in Tehran, the capital city of Iran. The people were waiting to welcome government officials who were returning from Geneva. The previous day an important announcement had been made in the Swiss city. After four days of talks, Iran and six world powers had finally made an agreement about Iran's nuclear programme.

The six world powers that took part in the talks are the USA, France, China, Russia, the UK, and Germany. Except for Germany all are permanent members of the United Nations (UN) Security Council. During the talks about Iran's nuclear programme these six countries have been called 'the P5+1'. (P stands for permanent.)

The leaders of each of the P5+1 countries did not attend the talks. Instead senior ministers represented them.

They included Sergey Lavrov, Russia's foreign minister, and John Kerry, the American secretary of state. Catherine Ashton, or Baroness Ashton, also took part. She is the European Union's head of foreign affairs.

For many years the USA, the UK, France, and Germany have suspected that Iran has been planning to develop nuclear weapons. In the past Iran's leaders have always said this is untrue. They have insisted that their country's nuclear programme was set up for peaceful reasons. This includes generating electricity from nuclear power and using enriched uranium in some medical equipment.

For the production of electricity from nuclear power, uranium has to be 'enriched'. This raises its radioactivity level. To be used in a nuclear weapon, uranium must be 'highly enriched'. Enrichment takes a long time and is very complicated.

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It can be done only in a purpose-built plant and specially designed, expensive equipment has to be used.

By the 1950s the USA, the UK, France, Russia, and China had all developed nuclear weapons. The UN then decided that because these weapons are so destructive it would be best if other countries were not allowed to develop them. People thought if every country had nuclear weapons, a nuclear war would be more likely to start.

The spread of nuclear weapons is called '**proliferation**'. So the UN's plan to stop it is known as non-proliferation. This has not been completely successful. Since the 1950s India, Pakistan, and North Korea have all developed nuclear weapons. Israel is believed to have nuclear weapons too, although it has never admitted this.



Hassan Rouhani, president of Iran

In 1957 the UN set up the International Atomic Energy Agency (IAEA). The organisation's headquarters are in Vienna, the capital of Austria. One of the IAEA's main jobs is to inspect all countries that use nuclear power to make electricity. This is why the IAEA is often called the UN's 'nuclear watchdog'.

Most UN member countries that make electricity from nuclear power agree to give the IAEA access to their power plants. This means IAEA inspectors may check to make sure these countries are not enriching uranium to a level needed for nuclear weapons.

In recent years Iran has refused to let the IAEA inspect all of its nuclear facilities. This is why other countries believe that Iran has been secretly working to develop nuclear weapons. Yet the Iranian government has always denied this. For many years Iran and Israel have been enemies. Some people think that Iran wants nuclear weapons because Israel has already developed them. Others say Iran wants to use these weapons to threaten nearby countries such as Saudi Arabia.

Several years ago, as Iran refused to let IAEA inspectors visit all its nuclear sites, the UN voted to impose **sanctions**. This means other countries are restricted in what they can sell to, or buy from, Iran. The sanctions, which are causing problems for many Iranian people, have had a bad effect on the country's economy. Iran's currency has been losing its value and certain items, such as petrol, have become much more expensive.

Six months ago Hassan Rouhani was elected as the new president of Iran. He took over from Mahmoud Ahmadinejad, who had been president for eight years. Many people thought that Mr Ahmadinejad was a 'hardliner'. This means he is a politician who has extreme ideas and refuses to compromise or listen to others who think differently.

While Mr Ahmadinejad was president, Iran had frequent arguments with both the USA and many European countries. Most of these disagreements were about Iran's nuclear programme. When Mr Ahmadinejad was in charge many Arab nations in the Middle East also became distrustful of Iran.

At the end of September Mr Rouhani visited New York City, in the USA. There he took part in a large UN meeting. While in the

USA Iran's new president said that he wanted to arrange talks about his country's nuclear programme.

After Mr Rouhani's trip to the USA the P5+1 and Iranian officials met in Geneva on 7th and 8th November. They did not come to any agreement. However, all agreed to hold more talks, which would begin on 20th November.

The deal agreed in Geneva is an interim agreement. It will only last for six months. However, after six months further talks will be held. Iran has agreed to halt or suspend its nuclear programme during this time. All uranium enrichment will stop for the next six months. Any uranium that has been enriched by more than 5% in the past will be reduced to less than the 5% level. At this level of enrichment it is not possible to make a nuclear weapon.

Over the next six months Iran will allow the IAEA to visit all of its nuclear sites. Around 100 inspectors from the nuclear watchdog will travel to Iran and begin work within the next few weeks. Furthermore, work on building a new facility or reactor at a place called Arak will stop. It's thought that this reactor has been designed to produce plutonium. This can also be used to make nuclear weapons.

In return the UN will slowly remove the sanctions that it has imposed on Iran. This is expected to improve Iran's economy and make life easier for many Iranian people.

Not everyone is happy about the agreement. The leaders of both Saudi Arabia and Israel complained. They claimed that Iran should not be allowed to keep the equipment that is needed for enriching uranium. Barack Obama, the president of the USA, was pleased with the announcement. He said it was progress 'toward a world that is more secure'. ■

PROTESTS IN UKRAINE

On 22nd November over 100,000 people took part in a large street demonstration in Kiev, the capital of Ukraine. The protesters were angry about an announcement that their government had made the previous day. It suddenly declared that the country would now not sign an agreement, or deal, with the European Union (EU).

The government of Ukraine has been talking to officials from the EU about this deal for the last three years. The agreement was to be signed at a meeting in Vilnius, the capital of Lithuania, at the end of November. It was meant to encourage trade between Ukraine and the 28 EU member countries. EU officials and Ukraine's government would also begin to work more closely with each other.

Ukraine was once part of the Russian-led Soviet Union. After the Soviet Union broke up in 1991 it became an independent country. Yet Ukraine is still closely tied to Russia. For example, it gets most of the oil and gas it needs from Russian companies. The country grows a lot of wheat. Much of this is sold to Russia. The ancestors of many people who live in the eastern part of Ukraine were Russians.

Viktor Yanukovich is the president of Ukraine. He became the country's leader after winning the 2010 presidential election. His main rival in the election was Yulia Tymoshenko.

In the election Mr Yanukovich won between 80% and 90% of the votes in the east of the country. Ms Tymoshenko got the same amount in the west. These results showed that Ukraine has become polarised, or strongly divided between two

different groups. Mr Yanukovich and his supporters believe that their country should be linked with Russia. Ms Tymoshenko's supporters want Ukraine to be more connected to European countries.



Street demonstration in Kiev

Soon after the 2010 election Ms Tymoshenko was accused of being corrupt, or dishonest. A court found her guilty. She has been in prison for the past two years. The leaders of many European countries were unhappy about what happened to her. As part of the agreement, the EU said that Ms Tymoshenko would have to be released.

Mr Yanukovich is friendly with Vladimir Putin, the president of Russia, and other Russian leaders. Russia wants Ukraine to be part of its Customs Union. This includes other former Soviet Union nations such as Belarus and Kazakhstan. Countries in Russia's Customs Union can easily trade with each other.

Many people in Ukraine think Russia was angry about the proposed EU deal. They believe that Mr Yanukovich was happy to sign the agreement, but Russian leaders told him not to do it. Some even suspect that Russia threatened to stop sending its oil and gas to Ukraine if the deal were signed. However, Mr Putin insists this is not true.

As well as Kiev there were large street protests in several other cities. These included Lviv, Donetsk and Odessa. Many demonstrators said

that they would continue their protest until the government agrees to sign the EU deal. Some held banners that said 'I want to live in Europe' and 'Ukraine is part of Europe'. ■

PAY VOTE IN SWITZERLAND

People in Switzerland took part in a referendum on 24th November. A referendum is a vote in which all adults can take part. The vote was to decide if there should be a limit to how much the bosses of large companies earn.

The voting system in Switzerland is different from most countries. Unlike other democratic nations, referendum votes are frequently held. There can be as many as four referendums each year.

If someone dislikes a certain law they can collect the [signatures](#) of other people who agree with them. If they collect at least 50,000 signatures then a referendum can be held. People then vote to decide whether or not the law should be changed.



Novartis company building in Switzerland

In recent years there have been referendums on the building of minarets and gun laws. Minarets are tall tower-like structures attached to some mosques. Traditionally these are used as a high place to call Muslims to prayer. Most people voted to end the building of minarets. They also voted not to change the gun laws.

The recent vote was called the '1:12 proposal'. Many large international companies have their headquarters in Switzerland. Some examples are Roche, a company that makes medical drugs, Nestlé, one of the largest food businesses in the world and Procter & Gamble. Procter & Gamble owns many well-known brands, especially [toiletries](#), or personal care, and cleaning products. Switzerland is also the base for several large international banking companies such as Credit Suisse and UBS.

Recently, some people in Switzerland have become angry about bosses' pay. They believe that the bosses of several large companies have been paid far too much. For instance, the chairman of Novartis was recently given Sfr72 million (£47 million). Novartis is a large pharmaceutical, or drug making, company. The chairman was stepping down, or leaving. Yet he was allowed to keep the money as long as he did not go and work for a rival company. When large sums of money are offered to senior people to join or leave a company they are often called 'golden hellos' or 'golden goodbyes'.

The 1:12 proposal meant that companies would have to follow strict rules about pay. Nobody in a company could be paid more than 12 times the amount that the lowest paid worker receives. For example, if the lowest paid worker's monthly pay is Sfr 3,000, no one else in the company can earn more than Sfr 36,000 per month.

The result of the referendum surprised many people. Around 66% of people voted 'no'. Many may have voted this way because they were worried about a 'yes' vote. Before the referendum some argued that if there were a 'yes' vote several big

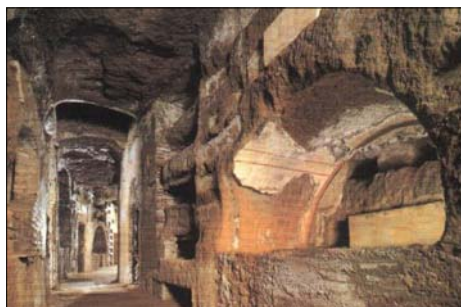
companies might leave Switzerland. They also warned that a 'yes' vote would deter large companies from other countries. If there were strict rules about pay, these companies would not want to set up in Switzerland. ■

CATACOMBS IN ROME

On 19th November officials from the Vatican reopened the '[Cubicle of Lazzaro](#)'. This small underground room is decorated with very old wall paintings, or frescoes. It was closed while the frescoes were being restored.

The Vatican is the headquarters of the Roman Catholic Church. Even though it is in Rome, the capital of Italy, the Vatican is a separate city-state.

People have lived in Rome for many thousands of years. There are lots of catacombs under the city. These are man-made underground tunnels or chambers. Some were built under ancient cities. They are places where the dead were buried and bones stored. Catacombs could also be used in times of trouble. If the city was attacked it was a place where people could hide.



Catacomb of Priscilla in Rome

The catacombs in Rome were dug out of tuff. This is a type of rock. It was formed from the ash from volcanic eruptions many millions of years ago. Unlike most other rocks tuff is soft. This means it is easy to

make tunnels through it and to dig underground chambers.

Originally all the catacombs were outside Rome's city walls. In Roman times it was against the law to bury bodies inside the city. The cubicle of Lazzaro is part of the Catacomb of Priscilla. It was probably named after the wife of an important Roman official. It's thought that the digging of this catacomb first began around 100 CE. Over the following 300 years it was extended for many kilometres.



Madonna and Child in the Catacomb of Priscilla

While the Catacomb of Priscilla was being used for burials more and more people began to follow the early Christian Church. Long shelves, one on top of the other, were cut into the sides of the tunnels. These look similar to bunk beds. Bodies were not buried under piles of rock in the catacomb. Instead they were laid out on these rock-cut shelves.

Some bodies of more important or wealthy people were placed in separate chambers that had been dug out from the rock. For instance, two popes, or leaders of the Roman Catholic Church, were buried in the Catacomb of Priscilla. Some of these chambers are like small chapels. Religious pictures were painted on their walls.

The frescoes in the Catacomb of Priscilla are some of the oldest Christian art in the world. For instance, in one place there is a painting

of the baby Jesus and Mary, his mother. These types of paintings are called 'Madonna and Child'. In the Christian faith Jesus Christ is the Son of God. The picture of Jesus and his mother in the Catacomb of Priscilla is the earliest known Madonna and Child. It was made sometime between 230 and 240 CE.

The Cubicle of Lazzaro also contains religious frescoes. They include pictures of Peter and Paul. These men were followers of Jesus. Both are important figures in the Christian faith. ■

BUDDHA'S BIRTHPLACE DISCOVERIES

An international team of archaeologists have spent the last three winters working at the Maya Devi temple in Lumbini, in Nepal. The temple is believed to be where Buddha was born. The team's leaders recently announced that they had made some exciting discoveries.



Maya Devi temple in Lumbini, in Nepal

The Lord Buddha is also known as Siddhartha Gautama. He was the founder of Buddhism. He was born in what is now Nepal. However, the date of his birth is not known. Most experts think that Siddhartha lived over 2,400 years ago.

Siddhartha was a very wealthy prince. However, he wanted to learn about what life was like for other people. To do this he went travelling. He

met many people, including teachers who believed wealth and possessions were not the most important things in life. Instead, they said, people should try to free themselves from being greedy for money and what it can buy.

Siddhartha spent a long time thinking or meditating about these ideas. By doing so, he eventually became what Buddhists describe as awakened, or enlightened. This means that he was free from greed, hatred, and delusion, or believing things that are not true. This is what the followers of the Buddhist faith try to do as well. The word Buddha means someone who has become enlightened.

Siddhartha spent the rest of his life teaching. He said people should not follow the ideas of Buddhism just because he said so. Instead, he told people that it is important for them to try to find enlightenment (also known as nirvana) on their own. Once they did this they would understand what he spoke about.

Traditionally, Lumbini is one of several places that have a connection with Buddha. The archaeologists worked inside the temple. It was built on the site of a number of older temple buildings. Digging down they discovered an ancient courtyard. The buildings around it had been made of wood. In the middle of the courtyard were the remains of a tree. It seems as if a shrine had been built around this tree.

It's said that Buddha's mother, Queen Maya Devi, gave birth to him while holding on to the branches of a tree. Tradition says that this tree was in a garden in Lumbini.

The archaeologists have managed to date some of the items they have found. These show that the wooden shrine was built around 2,500 years ago. This, the archaeologists explain, suggests that Buddha

was born sometime before the shrine was constructed. Years later shrines made of brick were built on top of the wooden one. Yet these brick-built shrines still had the courtyard in the middle.

Just before he died, aged 80, Buddha is supposed to have said that all followers of Buddhism should visit Lumbini. Many still do. Each year hundreds of thousands of Buddhists, from all around the world travel to Lumbini and the Maya Devi Temple. ■

JFK REMEMBERED

On 22nd November American flags on government buildings throughout the country were flown at half-mast. On the same day special ceremonies took place in several other countries. They were held to mark the 50th anniversary of the [assassination](#) of John F Kennedy, in the city of Dallas, in 1963.

JFK, as he was often called, won the 1960 American presidential election. He officially became the country's leader at the beginning of the following year. At age 43 he was the youngest person ever to have been elected as president of the USA. Kennedy was a member of the Democratic Party. In the 1960 election he just beat the Republican candidate, Richard Nixon. He won by less than 113,000 votes. During the Second World War (1939 – 1945) Kennedy served in the American navy.

To many people Kennedy is best known for some of his speeches. During his first speech as president he said the famous words 'Ask not what your country can do for you; ask what you can do for your country'.

The early 1960s was the height of what was known as the Cold War.

Then, the USA, together with its allies in Western Europe, were enemies with the Russian-led Soviet Union. Both Russia and the USA wanted to prove to the rest of the world that they had the best space technology. This rivalry was nicknamed the 'Space Race'.

In 1961 the Russian cosmonaut, Yuri Gagarin, became the first person in space. Less than six weeks after Gagarin's flight, Kennedy announced that the USA would, within ten years, 'land a man on the Moon and return him safely to the Earth'.



John F Kennedy and his wife in the city of Dallas shortly before he was shot and killed

Kennedy was the president at the time of what became known as the Cuban Missile Crisis. This happened in 1962. Several years before Cuba had become a communist country with Fidel Castro in charge. Mr Castro agreed that Russia could keep some of its nuclear missiles and 40,000 Russian soldiers in his country. Cuba is only 145 kilometres (90 miles) from the USA.

Kennedy demanded that Nikita Khrushchev, the Russian leader, remove his country's nuclear weapons from Cuba. He also said that Russian navy ships, which were sailing to Cuba, must turn back. As the Russian ships got closer many people believed that a nuclear war between the USA and the Soviet Union was about to start. Eventually, the two sides made an agreement. The

Russian ships turned back and the missiles were removed from Cuba. Some people describe the Cuban Missile Crisis as 'the most dangerous moment in human history'.

In 1963 Kennedy was hoping to win the next presidential election. He visited Dallas as part of his election campaign. He travelled through the city with his wife and several other people in an open-topped car. Three shots were fired from the sixth floor of a building. Two hit the president. He was rushed to hospital but died before he got there.

A man called Lee Harvey Oswald was arrested. A few days later Oswald was being taken to another jail. A person stepped out of the crowd and shot and killed him.

Hundreds of books have been written about what happened in Dallas 50 years ago. There are many [conspiracy](#) theories. When someone comes up with a conspiracy theory, they believe that a certain event was part of, or the result of, a secret plot. However, an official investigation declared that Oswald acted alone. It said that no other people or organisations were involved in JFK's assassination. ■

2013 WORD OF THE YEAR

Every year Oxford Dictionaries Online (ODO) chooses a 'Word of the Year'. The selected word or phrase is meant to [encapsulate](#) the overall 'sense', 'feel' or theme of the last 12 months. Recently the ODO announced that its word for 2013 is 'selfie'.

The ODO defines a selfie as 'a photograph that one has taken of oneself, typically one taken with a smartphone or webcam and uploaded to a social media website'. The

ODO says the word is a noun and its plural is 'selfies'. Every month, as part of its research, the ODO checks about 150 million words that are used online. It says that, over the last 12 months, the use of the word selfie has increased by 17,000%.



Akihiko Hoshide's selfie at the ISS

Oxford Dictionaries Online and Oxford English Dictionary (OED) are part of the same organisation. However, there is a difference. The OED was first printed in 1884. It is like a historical document. Words are not added to the OED until they have been in use for many years. It is also very unusual for any word to be removed.

The ODO began in 2000. New words are frequently added. These are the type of words that people use in conversation today. However, some of these words may fall out of use and not be used for a long time. If this happens they are removed from the ODO.

Even though selfie is now in the ODO it has not been added to the printed dictionary. Yet if it is still in use in several years' time it might be included.

The ODO believes that the word selfie was first used in Australia in 2002. It was mentioned in an online forum. Some people joke that selfies are much older. They say famous painters, such as the Dutch artist Rembrandt (1606 – 1669), produced selfies. These were the self-[portraits](#) they painted. Not long after cameras

became popular, over 150 years ago, people started taking selfies. They would do this by photographing themselves in a mirror.

The ODO says that other words on their [shortlist](#) for Word of the Year included 'binge-watch' and 'showrooming'. A binge-watch is watching a lot of television. Showrooming is looking at an item in a shop and then buying it online for a lower price.

Selfies have even been taken in space. Last year Akihiko Hoshide, an astronaut from Japan, travelled to the International Space Station (ISS). This orbits, or travels round, the Earth at a height of roughly 400 kilometres (248 miles). Each day the ISS completes 15.7 orbits of the Earth. During a space walk outside the space station, Mr Hoshide used a digital camera to photograph himself. Another astronaut can be seen in the reflection of his helmet [visor](#).

NASA's Mars Rover Curiosity has also taken a 'space selfie'. Curiosity is a six-wheeled remotely controlled vehicle. It landed on Mars in 2012. ■

LOYA JIRGA IN AFGHANISTAN

After four days of talks, a special meeting in Afghanistan ended on 24th November. The meeting, known as a *Loya Jirga*, took place in Kabul, Afghanistan's capital city. It was held at the request of Hamid Karzai, the country's president.

There are a number of tribes in Afghanistan. The largest is the Pashtun. Many Pashtun people also live in north west Pakistan. In their language *Loya Jirga* means a grand assembly or conference. President Karzai is a Pashtun. Some senior members of his government are from other tribes.

Traditionally, a *Loya Jirga* takes place in a large tent. About 2,500 tribal leaders, elders and other important people attended the assembly. Elders are older people. They are respected by other members of their tribe and considered to be wise.

Mr Karzai wanted the *Loya Jirga* to discuss an agreement that the USA government wants him to sign. Called the [Bilateral](#) Security Agreement (BSA), it says what should happen at the beginning of 2015. By this date most American soldiers are expected to have left Afghanistan.

Troops from the USA have been in Afghanistan since 2001. In that year a militant Islamic group, called al-Qaeda, attacked the USA. This group had its main bases in Afghanistan. Then the Taliban controlled the country. When the Taliban were in charge everyone had to follow very strict Islamic rules.

After it was attacked the USA demanded that the Taliban hand over the leaders of al-Qaeda who were in Afghanistan. When it refused to do this the USA organised an invasion of the country. The Taliban, who are mostly Pashtuns, retreated to the mountainous areas close to the border with Pakistan.

Mr Karzai was elected as the country's president a few years after the invasion. Since they arrived, American troops, together with soldiers from many other countries, have been training a new Afghan police force and army.

The Taliban have never been defeated. Many people think that the only way to end the war in Afghanistan is to hold peace talks with the Taliban leaders.

Several years ago Barack Obama, the president of the USA, said that all American troops would leave Afghanistan by the end of 2014. Troops

from other countries, such as the UK, France and Germany, are expected to withdraw before this date.

Currently there are around 100,000 foreign troops in Afghanistan. Of these about 68,000 are from the USA. Many people suspect that the Taliban leaders are waiting for the foreign troops to go. Nobody knows if the new Afghan army is strong enough to oppose the Taliban.



Hamid Karzai, president of Afghanistan

The USA currently gives the Afghan government about US\$8 billion (£5 billion) every year. Some of this money is used to pay the Afghan soldiers.

The USA says that Mr Karzai must sign the BSA before the end of December. The agreement says that 15,000 American soldiers will stay in Afghanistan after the others have left. These soldiers will help the Afghan army and provide important military equipment such as helicopters. The USA wants to start making plans to withdraw most of its soldiers. This is why it insists that the agreement is signed within the next few weeks.

However, Mr Karzai is unhappy about the BSA. It says that American soldiers cannot be put on trial in Afghanistan if they do something wrong. Mr Karzai also wants a ban on American troops entering Afghan people's homes. The agreement, he says, should not be signed until after the next presidential election. This will be held in five months' time. Mr

Karzai will not be taking part in this election. So the country will have a new president.

After four days of talks the *Loya Jirga* said that Mr Karzai should sign the BSA. The *Loya Jirga* can make suggestions. Yet it is Mr Karzai and the country's elected government that will decide. Taliban leaders say they will not take part in peace talks until all foreign troops have left the country.



Loya Jirga

The USA has threatened not to send any more money if Mr Karzai doesn't sign the BSA by the end of December. The USA says that without an agreement all its forces will leave Afghanistan within the next 12 months. ■

WARSAW CLIMATE CHANGE MEETING

The annual United Nations (UN) Climate Change Conference took place in Warsaw, the capital of Poland, between 11th and 23rd November. Over 10,000 people took part. They included officials from almost 190 countries, members of many different international organisations and climate scientists.

Around 50 years ago, scientists first discovered that the amount of carbon dioxide in the Earth's atmosphere was increasing. Most people now believe much of it comes from the burning of fossil fuels – oil, gas and coal. In most countries, fossil

fuels are used for generating electricity, heating, transport, and cooking. The amount of carbon dioxide in the atmosphere is now thought to be the highest it has been for about 800,000 years.

Nearly all scientists think this extra carbon dioxide in the atmosphere (and other gases such as methane) are acting in a similar way to a greenhouse. They claim that these 'greenhouse gases' are causing average world temperatures to rise and the Earth's climate to change.

Not all scientists agree on what will happen if average world temperatures continue to increase. Many predict there will be a rise in the sea level and more extreme weather such as heat waves, floods, droughts, freezing temperatures, and powerful storms. Some worry that if nothing is done about global warming, certain areas, especially those only a few metres above sea level, will become uninhabitable within 50 to 100 years. Yet others believe that, so far, the increase of greenhouse gases in the atmosphere has not made much difference.



Climate change conference in Warsaw

Many countries are now trying to find ways of making electricity, or energy, in a 'clean', or sustainable way. This means it does not create carbon dioxide. Examples of clean energy are wind, wave, and solar power. However, burning fossil fuels is still one of the least expensive and easiest ways of generating large

amounts of electricity. One of the problems is that the cost of electricity can affect a country's economy. Few people or companies want to pay more for electric power.

Many people think that all countries should sign a legally binding agreement about greenhouse gases. This would mean that they could be punished if they do not reduce them. Yet this idea has caused arguments between two groups.

Countries are often described as 'developed' (or wealthy) and 'developing' (less wealthy). Some developed countries, such as the UK, the USA and several European nations, first started burning fossil fuels over 150 years ago.

Developing countries, such as China, India and Brazil, also use large amounts of fossil fuels. But they only began to do so much more recently. Developing countries say that as developed countries were the first to start burning fossil fuels they have caused the problem. They argue that developed countries should pay for clean energy projects in developing ones.

Most developed countries disagree. They claim that in more recent times countries such as China and India have produced the most carbon dioxide.

Two years ago the UN Climate Change Conference was held in South Africa. At that meeting all countries agreed to sign a legally binding agreement. Yet they will not do this until 2015. That year's meeting will be held in Paris, the capital of France. Furthermore, the signed agreement will not come into effect, or force, until five years later, in 2020. Much of the time at the Warsaw meeting was spent preparing the wording of the agreement that will be signed in 2015.

Next year's Climate Change Conference will be held in Lima, the capital of Peru. ■

COMET EVIDENCE?

A team of researchers from South Africa have been studying an unusual black stone or pebble. They believe that it came from the nucleus of a comet. If the researchers are right, the pebble is the first evidence ever discovered of a comet striking the Earth.

Comets are often described as large 'dirty snowballs' that fly through space. As they do this they release dust and gas. Comets have a solid centre, called the nucleus. The nucleus is made mainly from frozen water, rocks and dust.

Scientists think that many comets hit the Earth in the past. Some believe that all the water on the planet came from comets. If this is true then many thousands of comets must have struck the Earth billions of years ago. However, scientists say that in more recent times comet strikes may have only happened about once every 500,000 years. Except for some carbon dust found far under the ice in Antarctica, no parts of comets have ever been found.

The pebble, which was studied by the South African researchers, was found in the Egyptian desert many years ago. It is black, shiny and very hard. The stone is also covered in cracks. The pebble has puzzled geologists, or scientists who study rocks. Most think it must be some type of meteorite.

The pebble was discovered in a part of the Sahara Desert where there are millions of pieces of a glass-like substance. This is called Libyan Desert Glass. It has a yellowish colour.

The glass, which is made of silica, can be found over an area measuring 6,000 square kilometres (2,317 square miles). This part of the desert is in both Libya and Egypt.

An ancient Egyptian **brooch** contains a piece of Libyan Desert Glass. It was found in Tutankhamun's tomb. The brooch has a scarab beetle in its centre. The beetle's body is made out of Desert Glass. Tutankhamun was an Egyptian pharaoh, or king, who ruled Egypt over 3,300 years ago. His tomb, which was full of valuable items, was discovered in 1922.



Brooch found in Tutankhamun's tomb, in Egypt; the body of the scarab beetle in the centre is made from Libyan Desert Glass

Scientists have managed to work out that the Libyan Desert Glass was created about 28 million years ago. The team of researchers believe a comet strike explains why the glass is in the desert. The comet, they say, exploded in the atmosphere above. Only a few small parts of it hit the ground. The explosion heated the sand below to about 2,000°C (3,630°F). This high temperature turned the sand to silica.

When the researchers examined the black pebble they found that it contained many tiny diamonds.

These can only be seen with a high-powered microscope. Diamonds are made from carbon. They are usually formed deep underground where the pressure is very high. Yet the pressure that comes from a powerful explosion can also create diamonds. Because of the tiny diamonds inside the pebble the scientists are sure that it came from a comet's nucleus.

Several space agencies, such as NASA, in the USA, are spending large amounts of money on future space missions. Some are designed to collect ice and rocks from comets as they fly close to the Earth. The South African researchers joke that if the pebble is part of a comet some of these space missions might not be needed. ■

PARLIAMENT BUILDING VOTE

On 20th November a number of important votes were held in the European Parliament. The parliament has two buildings. One is in Belgium and the other is in France. The vote was to decide if the parliament should stop using the French building.

The European Parliament was set up in 1979. It has over 750 elected members. The parliament is therefore one of the largest in the world. People who are elected to the European Parliament are called MEPs (Members of the European Parliament). They come from the 28 member countries of the European Union (EU). Therefore, EU member countries elect politicians both for their own parliaments and the European Parliament.

An election for the European Parliament is held every four years. The last one took place in 2009. The parliament is led by a president who is also known as the 'speaker'. The

current president is Martin Schulz. He is a German MEP.

The EU has several organisations. As well as the European Parliament there is the European Commission and the Council of the European Union (also known as the Council of Ministers).



European parliament building in Strasbourg

The European Commission runs the day-to-day management of the EU. The Commission is made up of 28 different departments. These departments cover all workings of the EU including trade, transport, health, industry, education, and taxation. The head of each department is called a commissioner. Each of the 28 EU member countries has one commissioner. Commissioners are not elected. Instead the leaders of their own country's government appoint them. Commissioners make decisions for the whole of the EU and not just their own countries.

The European Commission has a president. The current leader, or president, of the Commission is José Manuel Barroso. He is from Portugal.

Herman Van Rompuy, who is from Belgium, is the president of the Council of Ministers. The Council is made up of 30 people. They are the presidents of the Council of Ministers and the European Commission plus one elected leader from each of the 28 EU member countries.

At first the European parliament met in the city of Strasbourg, in France. However, the European

Commission and the Council of Ministers are based in Brussels, the capital of Belgium. The two cities are 435 kilometres (270 miles) apart. A new parliament building was constructed in Brussels in 1985. It was built so the parliament and the commission were closer together.

The move to the new building in Brussels caused disagreement. France wanted the parliament to stay in Strasbourg. An arrangement was made whereby most meetings or sessions would be held in Brussels. Yet, each month, at least one of them would have to take place in Strasbourg.

This arrangement means that the parliament building in Strasbourg is only used for four days in one month. Every month a special operation takes place. About 5,000 people have to travel from Brussels to Strasbourg and back again. These are MEPs, officials and translators. Furthermore, many trucks, loaded with official documents, have to drive between the two cities. Some jokingly call this the 'travelling circus'. The move to Strasbourg and back, 12 times a year, is estimated to cost €200 million (£166 million).

The majority of MEPs voted to stop the travelling circus. This means they would not have to travel to Strasbourg every month. However, the Council of Ministers will make the final decision. Many expect François Hollande, the president of France, to block, or veto, the proposal. ■

NEW WATERPROOF MATERIAL

Scientists working at a university in the USA believe that they have managed to make the 'driest ever' waterproof surface. To do this they added very small ridges to a silicon material. However, it seems that

nature may have 'invented' this type of waterproofing first. Some species of butterfly and the leaves of certain plants have similar tiny ridges.

When a raindrop strikes a surface it bounces off. A film of a raindrop seen in slow motion shows that it spreads out in a flat shape when it hits the surface. It then pulls back into a more rounded shape, or droplet, before bouncing off. This change from a flat to a round shape is caused by surface tension.

Surface tension is like a very thin 'skin'. In a pond small insects can often be seen sitting on top of the water. It is the surface tension that stops them from sinking. A water droplet is made up of many thousands of molecules. These molecules do not want to separate. They therefore hold on to each other very tightly. At the surface, on one side, there are no other water molecules to cling to. Here the molecules hold each other even more tightly. This is what creates the 'skin', or surface tension, on top of water.

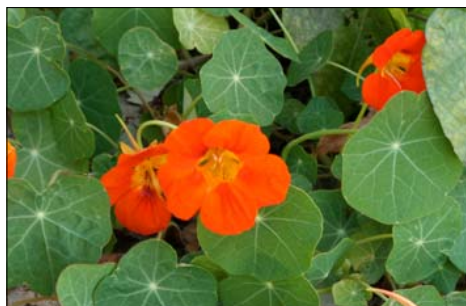


Butterfly

When a raindrop lands on a material it makes it wet. The amount of 'wetness' depends on the time the raindrop stays on it before it is shed or bounced off. A material can be made more waterproof by reducing this time. In the past researchers added special chemicals to materials to make them waterproof. These chemicals repel water, so the

amount of time a raindrop spends on the material is shortened.

The university scientists made the silicon material in a special way. They included chemicals that repel water and put thousands of tiny ridges on the material's surface. When raindrops hit these ridges they split, or break, up. These smaller 'bits' of raindrop pull back into smaller droplet shapes much faster. So they bounce off, or are shed, far quicker than larger single raindrops. So the ridges make the material more waterproof.



Nasturtium plant

In tests the broken up bits of raindrop spent 7.8 milliseconds on the material before bouncing off. When there were no ridges a larger single droplet stayed on the material for 12.4 milliseconds. The ridges reduced the time on the surface by about 37%. By adding more ridges or cross ridges the scientists believe that bits of raindrops could be made to bounce off even quicker.

Some butterfly wings have similar tiny ridges. These are usually called veins. The scientists' work therefore also explains how these butterfly wings stay dry. Similar veins can be found on the leaves of nasturtium plants. These leaves also stay very dry.

The scientists say that their new 'extra' waterproof material could have many uses. For example, it is important that water does not stay on aircraft wings, especially in sub zero temperatures, as it might turn

to ice. The quicker water comes off power lines the less time it has to freeze. The tiny ridges could also be included in some fabrics. Coats, sportswear, uniforms and tents made from this fabric would stay dry for much longer. ■

WORLD'S OLDEST CREATURE, REDISCOVERED

Seven years ago researchers from a university in the UK [dredged](#) up a type of edible clam. Called an ocean quahog, this species of clam is only found in the North Atlantic Ocean. The researchers were surprised to discover that it had been alive for 405 years.

The clam was nicknamed Ming. Its name came from the Ming Dynasty. Emperors from this dynasty, or royal family, ruled China between 1368 and 1644. As the clam had been living for 405 years it would have been born during the Ming Dynasty. The clam was declared to be the oldest creature, ever discovered, whose age could be accurately worked out.

However, a team of researchers at the same university have recently completed another study of Ming's shell. They realised that, seven years ago, a mistake was made. The ancient clam was even older. The scientists explained that when Ming was found it was 507 years old and not 405.

The age of clams can be worked out by counting the lines of growth in their shells. These growth lines are similar to the rings that can be seen in the trunks of trees after they have been cut down. Tree rings form [concentric](#) circles. Each ring or circle is one year's growth of the tree. By counting the rings it's possible to calculate the tree's age.

To count the separate growth lines on a clam's shell it has to be cut in half. The lines are very close together. Counting them is difficult. Nowadays this is done with the use of more accurate equipment. Fortunately, Ming can keep its name. Even though the clam was 507 years old, it was still born during the Ming Dynasty.

In history Ming was born about seven years before Columbus sailed across the Atlantic Ocean. When the clam was very young Michelangelo was about to begin his famous ceiling paintings, or frescoes, in the Sistine Chapel. This chapel is in the Vatican, in Rome, the capital of Italy. The Vatican is the headquarters of the Roman Catholic Church.

A clam's shell grows only during the summer when the sea is warmer and there is more food. Clams eat tiny bits of marine plants and animals. Warmer years produce different patterns and thickness in the lines of a clam's shell. This is why climate scientists study them. From growth lines scientists are able to tell if the local climate was warmer or cooler during different years of a clam's life.



Ocean quahog

Clams are known to live for hundreds of years. It is not unusual to find clams around Iceland, in the North Atlantic Ocean, that are 200 years old. Scientists believe that studying these clams might help them to understand how the process of ageing can be slowed. If this were

known it might even be possible to make humans live longer.

To count the growth rings on a clam's shell it has to be opened. Unfortunately, this kills the clam. Therefore, without knowing it, the researchers who opened Ming killed the world's oldest living creature. However, they are sure that other ocean quahogs, even older than Ming, will be found in future. ■

DINOSAUR SALE

An unusual [auction](#) was held in the UK on 27th November. Auctions often take place for the sale of well-known paintings or valuable jewellery or gemstones. Yet this one was held to sell the fossilised bones of a 17-metre (56 foot) long dinosaur.

The fossilised bones are from a *diplodocus* dinosaur. It was a type of sauropod. There were many different types of sauropod. These dinosaurs had very long necks and tails. They walked on four thick legs. Sauropods ate vegetation such as grasses, and the leaves and smaller branches of trees. Some grew to an enormous size. Their bones have been found on all the Earth's continents, including Antarctica.

The fossilised *diplodocus* has been nicknamed 'Misty'. Its bones were discovered in the USA. Even though fossils are usually called bones, they have really turned into stone. In 2009 a German palaeontologist, or scientist who studies fossils and prehistoric life, was looking for dinosaur bones in the state of Wyoming. As it was during the school holidays his two teenage sons were with him.

The two boys wanted to go off and look for their own fossils. Their father sent them to a nearby area. Other scientists believed that this

place was unlikely to have any fossils. However, soon afterwards the teenagers returned. They said they had discovered a bone that was too big to carry. It then took nine weeks to excavate, or dig up, all the fossilised bones. The *diplodocus* skeleton was found in a layer of rock that is about 150 million years old. It was named Misty because it was found in a place called the Mystery [Quarry](#).



Diplodocus at the museum, in London

Misty is unusual. This is because almost all the dinosaur's bones were found. Complete dinosaur skeletons are rarely discovered. This is because dinosaur bones could be washed away by floods or taken by other meat-eating dinosaurs.

One of the best-known *diplodocus* skeletons is just inside the entrance to the Natural History Museum, in London, the capital of the UK. Yet this skeleton is a copy, or replica, of another *diplodocus* that was found in the USA. This dinosaur skeleton was discovered over 100 years ago. But it was not complete. So bones taken from another incomplete *diplodocus* were used to replace the missing ones.

The German scientist was allowed to take the bones out of the USA. This was because they were found on private land. He and the landowner agreed to share the money from the auction.

Misty was sold for £400,000 (US\$653,000). The name of the per-

son or organisation that bought the skeleton has been kept secret. However, the auction company said the buyer would put the *diplodocus* on public display in future. ■

AID TO THE PHILIPPINES

On 20th November officials in China announced that they would be increasing the amount of aid their country was sending to the Philippines. This aid is to help tens of thousands of people who were affected by the recent typhoon.

The Philippines is made up of around 7,000 islands. The two largest are Luzon, in the north of the country, and Mindanao, in the south. In between are a number of smaller central islands. This is where the huge storm, called Typhoon Haiyan, struck. It destroyed tens of thousands of houses on the islands of Leyte and Samur.



China's Peace Ark hospital ship

Typhoons are very large and powerful tropical storms. They bring strong winds and huge amounts of rain. Typhoon Haiyan was what's known as a Category 5 typhoon. These are the most powerful. They are often called 'super typhoons'. Some of the storm's winds blew at 315 kilometres (195 miles) per hour. The typhoon is believed to be one of the most powerful storms ever recorded to hit land, or make landfall.

Typhoon Haiyan also created a storm surge. This hit Tacloban,

which is the largest city on the island of Leyte. Storm surges are huge waves of seawater that the strong winds push far inland. The waves that struck parts of Leyte were five metres (45 feet) high.

Landslides caused by the heavy rain blocked many roads. As well as destroying buildings, Typhoon Haiyan blew down thousands of banana and coconut trees. It also badly damaged large areas of fields and rice crops. It's thought that the storm killed over 5,000 people. Many of those who died were in Tacloban. The United Nations (UN) says that 11 million people were affected by the typhoon. It estimates that as many as 673,000 have lost their homes.

After the storm struck, the government of the Philippines began to send help to the places worst affected. Military planes were used to

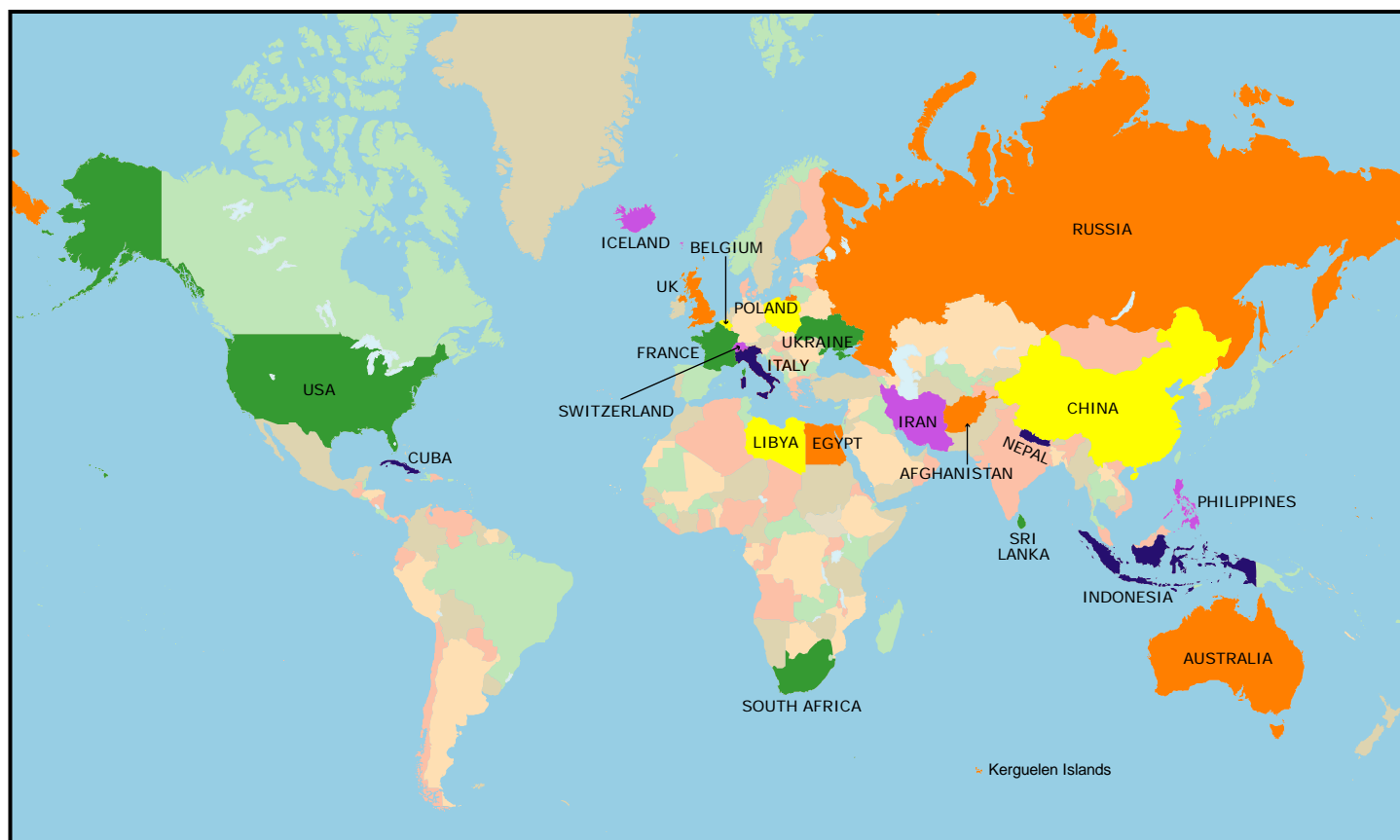
take soldiers, rescue workers and supplies to Tacloban.

Many countries offered to help. Within days American military planes, helicopters and ships arrived. The helicopters are being used to take food, drinking water and medicines to remote villages and towns. Other nations began sending aid. This included extra food, tents, blankets, medical supplies and generators for making electricity. Many also sent medical teams, as nearly all the local hospitals on Leyte and Samur were destroyed.

Other military ships and planes from Australia and the UK have now arrived in the Philippines. Many countries also offered to donate money. For instance, the UK, Canada, Australia, Japan, Norway and the USA each pledged, or promised, to give more than US\$20 million (£12.25 million).

At first China only offered a small amount. Chinese officials said they would give US\$100,000 (£61,000). As China has the world's second largest economy, most people thought it should give much more. Many suspected that China only offered this amount because it has recently been having an argument with the Philippines. The disagreement is about which country owns some small, uninhabited islands in the South China Sea. In the Philippines this sea is known as the West Philippine Sea.

However, 12 days after the typhoon struck Chinese officials declared that they had decided to send more money and help. They announced that specially trained rescue workers and medical teams were on their way. On 21st November a Chinese military ship began sailing to the Philippines. Called the 'Peace Ark' it is like a floating



hospital. The ship has 300 beds, several operating rooms, or theatres, and around 100 doctors and nurses on board. ■

GAMMA-RAY BURST

Seven months ago a satellite called Swift recorded a gamma-ray burst far out in space. Two other satellites spotted the same explosion. Recently, after checking these recordings, a team of astronomers made an announcement. They said this gamma-ray explosion was the biggest and brightest that has ever been detected.

Since the Big Bang, 13.7 billion years ago, gamma-ray bursts have been the most powerful explosions that occur in the Universe. Our Sun is expected to last for about ten billion years. A gamma-ray burst can release more energy in ten seconds than the Sun will throughout its lifetime.



Illustration of a gamma-ray burst (NASA)

Gamma rays are invisible to the human eye. They have a very short wavelength and are very energetic. (If you were **exposed** to a large dose of gamma radiation here on the Earth it would be very dangerous.) Gamma-ray bursts can be both short and long. The short ones only last for a few seconds. Longer bursts can go on for a couple of minutes. The one detected seven months ago was a long gamma-ray burst.

NASA (the National Aeronautics and Space Administration) launched

the Swift satellite in 2004. It was made to detect and record gamma-ray bursts. The satellite is named after a type of bird. Swifts spend most of their time in the air and can fly very fast. As gamma-ray bursts do not last long the Swift satellite was specially designed. Once it detects a burst the satellite is able to turn and face the explosion in less than 70 seconds. Each year Swift records around 100 gamma-ray bursts. Most are short ones.

Large exploding stars cause longer gamma-ray bursts. These explosions happen when a huge star, perhaps 20 times bigger than the Sun, uses up all its fuel. The star suddenly collapses into a black hole and explodes. The explosion is called a supernova. It ejects gamma radiation into space for many billions of kilometres. Any planet near a gamma-ray burst would be burnt up. Its atmosphere would be instantly torn, or stripped, away.

From the satellite recordings the team of astronomers were able to work out several things about the star that exploded. It was only three or four times the size of our Sun. Yet its mass was 20 to 30 times larger. It took light from the explosion about 3.7 billion years to reach the Earth. Therefore the star exploded a long time ago, or when the Universe was around ten billion years old.

Nearly all the recorded gamma-ray bursts have been in far-off galaxies. So far none have been seen in our own galaxy, the Milky Way. The one detected seven months ago was closer than most of the others. However, the astronomers said the Earth would not have been in any danger. This is because the planet's atmosphere would have absorbed any gamma radiation that had travelled this far. ■

ALBATROSS FLIGHT

Albatross can fly for hours without flapping their wings. These large seabirds are able to travel 16,000 kilometres (10,000 miles) in one journey. Scientists have often wondered how they are able to do this. A team of researchers from Germany now think that they know the answer.

The researchers attached GPS trackers to a group of 16 wandering albatross. These showed where the albatross were every ten seconds. From this information the scientists were able to record the birds' flight path.

Albatross are one of the largest birds in the world. There are 22 different types, or species. The wandering albatross is the biggest. Its wingspan, or the measurement from one wing tip to the other, can be 3.5 metres (11.5 feet). Wandering albatross live in the southern oceans. They eat small fish and octopus. These large birds are known to be able to fly around the world in 46 days.

Wandering albatross weigh around 11 kilograms (24 pounds). When a bird flaps its wings it uses up a lot of energy. An albatross would have to eat much more to survive if it flapped its wings as often as many other birds do. As an example, tiny hummingbirds flap their wings about 70 times a second. These small birds weigh less than 2.5 grams (0.1 ounces). Hummingbirds use so much energy flying that they need to eat three times their own body weight every day.

For birds, albatross live a long time. They have an average age of between 40 and 50 years. Albatross spend most of their lives in the air. The seabirds only return to land to breed. They make a nest on the

ground. Females normally only lay one egg each year.

The researchers fixed their tracker devices to albatross that make their nests on the Kerguelen Islands. These are a group of small islands in the southern part of the Indian Ocean. France owns the Kerguelen Islands. No native people have ever lived there. However, there are usually at least 50 French scientists and researchers living on the islands.



Wandering Albatross (JJ Harrison)

The tracking devices showed that albatross fly in long up and down movements. The researchers call this 'dynamic soaring'. They face the oncoming wind and hold their outstretched wings at a certain angle. The wind pushes them to a height of around 15 metres (50 feet). They then turn and glide, or swoop downwards, until they are just above the waves. After a while they go back up again.

The albatross do not flap their wings when they are doing this up and down movement. During the downward part they travel about 100 metres (330 feet) at a speed of roughly 108 kilometres (67 miles) per hour. By repeatedly going up and down like this they can travel for many thousands of kilometres without flapping their wings.

Nowadays nearly all the 22 species of albatross are endangered. The main problem is fishing boats that use 'longlines'. These lines have many hooks. On each is a piece of

bait. If an albatross tries to eat the bait it can get caught on the hook. It's thought that longlines kill around 100,000 albatross every year. ■

VOLCANIC ASH SYSTEM TESTED

Three companies have been working together to try to solve a volcanic ash problem. Recently they successfully tested their new sensor equipment. They call it AVOID (Airborne Volcanic Object Infrared Detector).

The three companies are Airbus, Nicarnica [Aviation](#) and easyJet. Airbus, which is based in France, makes large passenger aircraft. Nicarnica is a Norwegian firm. It designs sensors that are used on planes, and easyJet is an airline company from the UK.

In 2010 there was a big volcanic eruption in Iceland. The volcano, called Eyjafjallajökull (pronounced aya-vel-lo-kulth), erupted for many days. Huge amounts of volcanic ash were thrown high into the atmosphere. This ash was made up of tiny pieces of silica, which is similar to glass. As the pieces were so small they were like an invisible dust. The winds then blew the ash in the air over large parts of Europe.

If a lot of volcanic ash gets into an aircraft's engines it can cause them to shut down. Airline authorities in northern Europe ordered planes not to fly. Many people thought the problem would last only for a short time. But the volcanic eruption continued and the winds kept blowing the ash clouds towards northern Europe.

For six days thousands of people were unable to travel as more and more flights in Europe were cancelled. The closed airports caused more problems farther away. Planes from places such as North America,

India, Asia and Australia were not able to fly to airports in northern Europe. Hotels in many larger Asian cities such as Hong Kong and Singapore became full with people waiting to travel back to their home countries.

Many airlines lost large amounts of money. Experts estimate that all the flight delays cost the airline companies at least £1 billion (US\$1.63 billion). It's thought that over the six-day period around 95,000 flights were cancelled.

Some larger European airlines began to question the authorities' decision to continue to stop all flights. Some said they thought the ash clouds were no longer thick enough to affect aircraft engines. Several airline companies arranged tests. Pilots flew empty passenger planes through the sky where ash clouds were believed to be. After these flights returned experts inspected the planes' engines, which were found to be unaffected.



Eyjafjallajökull eruption in 2010

The main problem was that it was not possible to detect exactly where the ash clouds were. So, to be safe, the authorities insisted that the airports remained closed.

The new AVOID system has been designed to stop something similar from happening. To test it an Airbus Military A400M plane [dispersed](#) one tonne of volcanic ash into the air above the Bay of Biscay, near France. The ash, which came from Iceland, created a cloud that

was about 2.8 kilometres (1.7 miles) wide and 245 metres (800 feet) deep.

An empty easyJet passenger plane then flew towards the ash cloud. The ash was detected by the AVOID system when the plane was about 60 kilometres (37 miles) away. It also measured how big the ash cloud was. This early detection meant the pilot had time to change course. He could fly above or around the ash cloud.



Airbus plane dispersing volcanic ash (Airbus)

In future most passenger planes will probably be fitted with the AVOID system. If so, planes in Europe should be able to keep flying even if there is another large eruption in Iceland or elsewhere. ■

COMMONWEALTH MEETS IN SRI LANKA

The Commonwealth Heads of Government Meeting (CHOGM) began on 15th November. It lasted for three days. The meeting, or summit, was held in Colombo, the largest city in Sri Lanka. Sri Lanka's president, Mahinda Rajapaksa, hosted it.

The CHOGM takes place every two years. The Commonwealth's official name is the Commonwealth of Nations. Currently it has 52 member countries. Originally all member countries were former colonies of Britain. However, not all nations that were once British colonies are

members. Some, such as Egypt, have chosen not to join. In recent years three African countries joined the Commonwealth that were not former British colonies. These are Rwanda and Cameroon, which were colonies of France, and Mozambique, a former Portuguese colony.

As well as being the Queen of the UK, Queen Elizabeth the Second is the head of the Commonwealth. Sixteen Commonwealth member countries also have Queen Elizabeth as their head of state. These countries are known as Commonwealth realms. They include Australia, New Zealand, Canada, and Jamaica.

The CHOGM in Sri Lanka was the first time in 40 years that Queen Elizabeth did not go to the Heads of Government Meeting. She is now 87 years old. Many people think that Queen Elizabeth will now reduce the number of times she travels to other countries. Prince Charles, her eldest son, attended the meeting in her place.

Commonwealth countries must be democracies that allow free speech, equality of different races, free trade, and a desire for world peace. Members that do not follow these rules can be expelled or suspended. For example, currently Fiji is suspended. This, say Commonwealth officials, is because military leaders **deposed** Fiji's elected government and took over the running of the country several years ago.

Commonwealth member countries are estimated to be responsible for about 20% of the world's economy. This is expected to grow. India, which has one of the world's fastest-growing economies, is a member. A former Indian diplomat, Kamalesh Sharma, is the current secretary-general, or leader, of the Commonwealth.

When Sri Lanka was a British colony it was called Ceylon. It

became an independent nation in 1948. For over 25 years there was a civil war in Sri Lanka. It finally ended in 2009. The war was between government forces and the Tigers of Tamil Eelam (LTTE). This group was usually called the Tamil Tigers.

The Tamil Tigers claimed to be fighting for an independent country or homeland in the north of Sri Lanka. Supporters of the LTTE claimed that Tamils in Sri Lanka were badly treated. The Tamils, who originally came from India, are Hindus. They mostly live in northern Sri Lanka. Most people who live in Sri Lanka are Buddhists. These people, who are known as Sinhalese, speak a different language to the Tamils.



The leaders of Commonwealth countries

During the war both sides are believed to have committed **atrocities**. When it ended the Sri Lankan army captured the LTTE headquarters. The Tamil Tigers' leader was killed. Thousands of others also died. Most were unarmed civilians. Many people suspect that these Tamils were deliberately killed, or murdered, by the Sri Lankan army. However, the government of Sri Lanka says this is not true.

Some people say that the Sri Lankan government is still **persecuting** the Tamils in the north. The government denies this. Others have accused President Rajapaksa of war crimes.

Several Commonwealth members were unhappy that the meeting was held in Sri Lanka. A few said the country should be suspended from the Commonwealth. They believe an investigation should be held to find out what happened at the end of the war. As a protest Stephen Harper and Dr Manmohan Singh, the prime ministers of Canada and India, refused to attend the meeting.

While in Sri Lanka, David Cameron, the prime minister of the UK, visited the north of Sri Lanka. There he spoke to many Tamils. Afterwards he talked with Sri Lanka's president. Mr Cameron suggested that a war crimes investigation was needed. On 28th November the Sri Lankan government said it would try to work out how many people died in the war. ■

AUSTRALIA AND INDONESIA

On 21st November Susilo Bambang Yudhoyono, the president of Indonesia, sent a letter of complaint to Tony Abbott, Australia's prime minister. In the letter the Indonesian president said he was angry about recent spying reports. These said that Australia had secretly tried to listen to, or monitor, Mr Yudhoyono's mobile phone calls.

In recent years Australia and Indonesia have worked closely with each other. Nearly all government ministers in Australia say that their country's relationship with Indonesia is very important. This is mainly because the two countries are not far from each other. They are also big trading partners. This means that each sells many of the items they make or produce to the other.

Mr Abbott became Australia's new prime minister last September. This was after his party won the latest election. The first country that

Mr Abbott visited after becoming Australia's new leader was Indonesia. He did this so he could discuss the problem of 'asylum seekers'.

Asylum seekers are people who try to travel to Australia unlawfully. Many come from countries such as Iran, Iraq, Sri Lanka, Afghanistan, as well as Indonesia. All want to go to Australia because they are seeking a better life. To get to Australia many of these asylum seekers first travel to Indonesia.



Tony Abbott and Susilo Bambang Yudhoyono

In Indonesia some boat owners will agree to take asylum seekers to the Australian coast. But they will only do this if they are paid large amounts of money. Those who arrange these boat trips are known as people smugglers. Their boats are usually old and nearly always overcrowded. In recent years a number of these boats have sunk in rough seas. When this happens most of those on board drown.

During his visit Mr Abbott asked Indonesia to do more to stop the people smugglers. He also wants Australian navy ships to force boats, which are carrying asylum seekers, to sail back to Indonesia.

Recently stories were printed in Australian newspapers about spying. These said that in 2009 Australian spy agencies worked with spying organisations in the USA. The newspaper reports said that special equipment was set up in the Australian embassy in Jakarta, the capital

of Indonesia. This was used to try to listen to mobile phone calls made by the Indonesian president and his wife. This is known as 'bugging' or 'eavesdropping'. The spying organisations also tried to listen to the mobile phones of several senior Indonesian government ministers.

The stories about spying are believed to have come from Edward Snowden. Mr Snowden is what's known as a 'whistleblower'. He used to work for an American spying agency. Last March he suddenly left his job and travelled to Hong Kong, in China. There he passed, or leaked, secret information to several newspapers. This information was about American spying operations in many different countries. People who take the risk of doing this are often described as 'leakers' or whistleblowers. Mr Snowden is now living in Russia.

Mr Abbott declared that he would not apologise for what the Australian spying agency had done in Indonesia in 2009. He said that all governments gather information on other countries. Mr Yudhoyono says he wants the Australian government to explain how much spying it has done in Indonesia. The president declared that his country would now review how closely it works with Australia in future. ■

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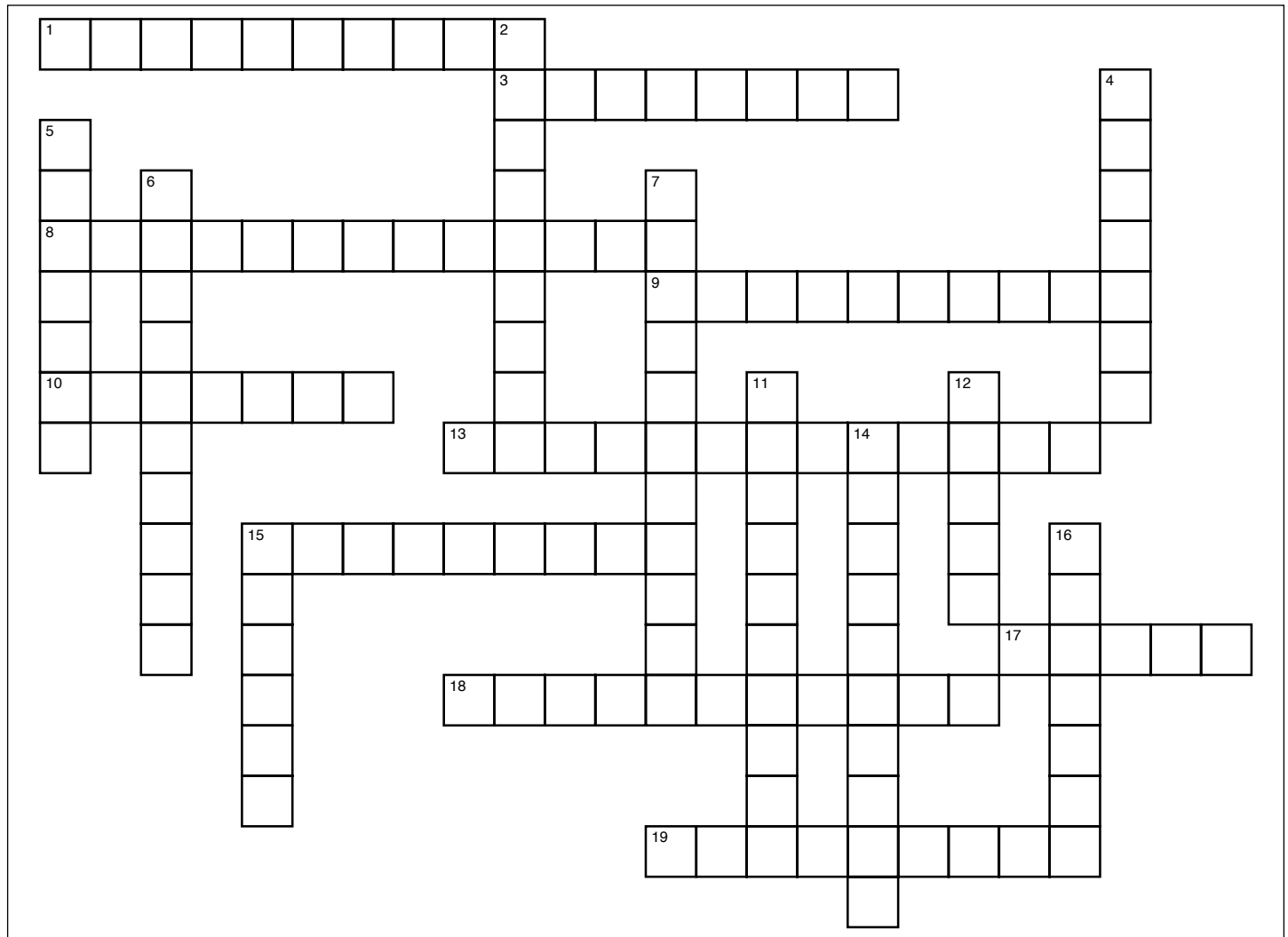
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ISSUE 211

GLOSSARY PUZZLE

INSTRUCTIONS: ① Complete the crossword. The answers are highlighted in orange in the news stories. There are 25 words highlighted and you need 20 of them to complete the crossword. ② Once you have solved the crossword go to the word search on the next page ➡



Across

- 1 Noun (Plural)** Things such as soap and toothpaste that are used for washing and taking care of your body
3 Noun To do with flying or aircraft
8 Noun Increase greatly and suddenly in number
9 Adjective Describes circles and rings that have the same centre
10 Verb To be brought into contact with something, often something harmful
13 Noun The killing of an important person, especially for political reasons
15 Adjective Describes something that involves two sides or groups
17 Verb Reject or force away
18 Verb Continually mistreating somebody or a group of people
19 Verb Scattered

Down

- 2 Noun (Plural)** Measures applied to force a country to stop doing something
4 Noun A small area within a larger room that is closed off or nearly closed off with its own walls
5 Verb Removed a person from power
6 Noun A secret plot by a group of people
7 Verb To put in a short or easy to understand form of words
11 Noun (Plural) People's names written in their own handwriting
12 Noun See through part of a helmet that can be pulled down to protect the face
14 Noun (Plural) Terrible crimes
15 Noun A decorative ornament with a pin that women fasten to their clothes
16 Verb Dragged a frame or net along the seabed to catch shellfish or remove unwanted material

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GLOSSARY PUZZLE *CONTINUED*

A T R O C I T I E S J S X A Q W H E
S V O B I L A T E R A L S S A B I N
S L I C U K N U P N D E S O P E D C
A E U A B D V G C S F E N Y F S B A
S U D N T T C T J D W A S R L H K P
S L D F R I I I Q N I P M O F S G S
I Y E Z S O O W Z M N S W X P T I U
N B G V N Q X N A T G B P K R X W L
A A D S E R U T A N G I S E C J E A
T E E L E P E R I Q W O R H R S P T
I Z R M F Q X T P Q Z R M R H S A E
O N D D L I U E T O I L E T R I E S
N J Y J H C O O R B H S Q I E H F D
F R T C E V B R C O N C E N T R I C
S K R S I V H Y C A R I P S N O C C
R Q R S P Z M N K I W E H C K U Z A
G E O U R P F N G U A F P B C N U C
P R O L I F E R A T I O N J C N Z A

INSTRUCTIONS: ③ Find 19 of the 20 crossword answers in the word search. Words can go vertically, horizontally, diagonally and back to front. ④ After finding the 19 words write down the 20th (or missing) word under the puzzle.

Demics are tokens that Individual and Family Subscribers can earn. They are awarded for answering this Glossary Puzzle and/or the Daily News question – accessible by logged in users – correctly. Demics earned can be used by Family and Individual Subscribers in the Newsademic online store.

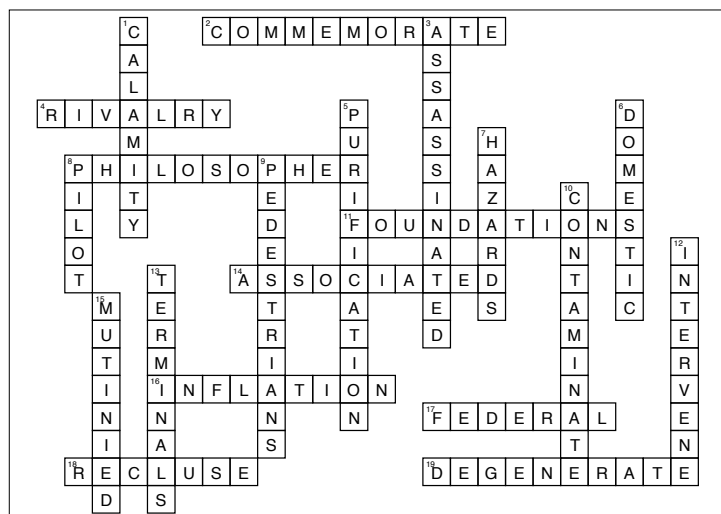


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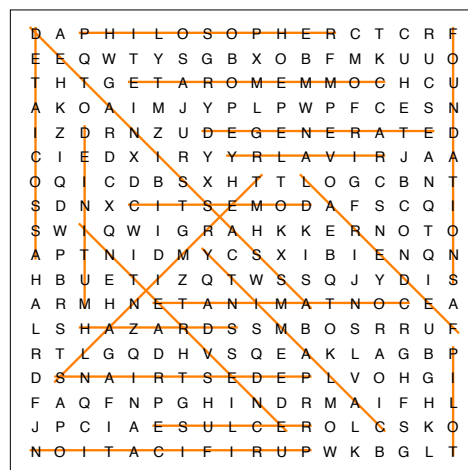
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If you wish to earn additional Demics log in to www.newsademic.com, go to the Prize Competitions area and submit the missing word. Puzzle entries must be submitted by 10 pm on 11th December 2013 (GMT/UTC).*

MISSING WORD ANSWER =



ISSUE 210 ANSWERS



I N F L A T I O N